

RHODE ISLAND RAPID RAIL

A Strategy for Economic Growth

Concept Paper

March 2019



GrowSmartRI
Sustainable Economic Growth
& Quality of Place

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Purpose

This paper is being submitted to RIPTA and its planning consultants for consideration and evaluation as part of Rhode Island's first-ever Transit Master Planning process now underway.

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Introduction



A robust and comprehensive transportation system is a fundamental component of a dynamic and successful society. Transit plays a vital part in creating a healthy vibrant economy and high quality of life by effectively and efficiently connecting people, businesses and places. Whether across town or across the globe, public transportation is a catalyst for increasing productivity, generating new opportunities and improving the environment.

Among the challenges facing many states today is how to simultaneously reinvest in aging mid-20th century roads and highways while at the same time adapting to the transportation needs of the 21st century. Rhode Island is no exception.

Examples abound of transit systems that have met the challenge successfully. Seattle for example, has made targeted investments and re-worked network designs that have resulted in increased ridership and decreased use of cars for commuting, despite an overall increase in the number of jobs downtown. In Houston, its transit agency grew ridership by expanding access to more areas and adding high-frequency bus service to others with no increase in operating costs.

Rethinking mobility in RI

Transit ridership in Rhode Island is currently less than half of the national average¹, despite the fact that it is the second most urbanized state, is bisected by the most heavily-traveled rail corridor in the country and is home to multiple colleges and universities. Providence commuters ride transit at significantly lower rates than nearby cities in Massachusetts and Connecticut, and transit commuters in Warwick, the State's second largest employment center, are almost nonexistent. Since 2013, the Rhode Island Public Transit Authority (RIPTA)'s ridership has dropped by 19%, and the Massachusetts Bay Transportation Authority (MBTA) ridership in Rhode Island has declined by 16%.² Reversing this trend and getting our transit system to really work for Rhode Island will require that it compete more effectively with trip times by automobile.

Governor Gina Raimondo showed great vision by initiating in 2018 the State's first-ever Transit Master Plan (TMP), led by outside consultants and senior planners at RIPTA, the Rhode Island Department of Transportation (RIDOT) and the Rhode Island Division of Planning (the Working Group). *TransitForward RI 2040*, now underway, will envision how best to get more people where they need to go quickly, affordable and efficiently. The process will involve nearly a year of careful analysis, informed by input from the public and business community, resulting in a long-term transit vision and action plan expected to be completed by fall, 2019.

¹ According to the 2017 American Community Survey, only 2.2% of Rhode Islanders use public transit as a means to get to work on a regular basis. 3.5% of commuters in Providence and less than 1% of commuters in Warwick use public transit, compared to 34% in Boston, 29% in Cambridge, and 17% in Hartford. According to the RI Department of Labor and Training, 21% of all RI jobs are in Providence, and 9% are in Warwick.

² RIPTA Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2018 and RIDOT MBTA ridership data.

The concept proposal that follows is an effort to think creatively and boldly about how Rhode Island can leverage existing transit assets and position itself to compete for discretionary federal funding for such projects.

Rhode Islanders have already demonstrated their strong support for better transit. In 2014, by a margin of 20 percentage points, state voters approved a \$35 million Mass Transit Infrastructure Bond issue to help modernize statewide transit. (See Appendix). In 2016, five communities and institutions, including Quonset Development Corporation, the Towns of North Kingstown and

“Rhode Islanders have already demonstrated their overwhelming support for better transit”.

South Kingstown, the University of Rhode Island, and the City of Woonsocket.³ made requests for increased rail service or rail feasibility analyses in the State’s Transportation Improvement Plan (TIP) solicitation process. The Transit Subcommittee of the State Transportation Advisory Committee (TAC) recommended that all five requests be studied as part of the Transit Master Plan that is now underway.

Improved public transit has the potential to accelerate Rhode Island’s economic growth, contribute to the revitalization of its cities and towns, measurably decrease carbon emissions, boost housing production, better connect workers with jobs and save many residents thousands of dollars each in annual transportation costs.

Rhode Island Rapid Rail

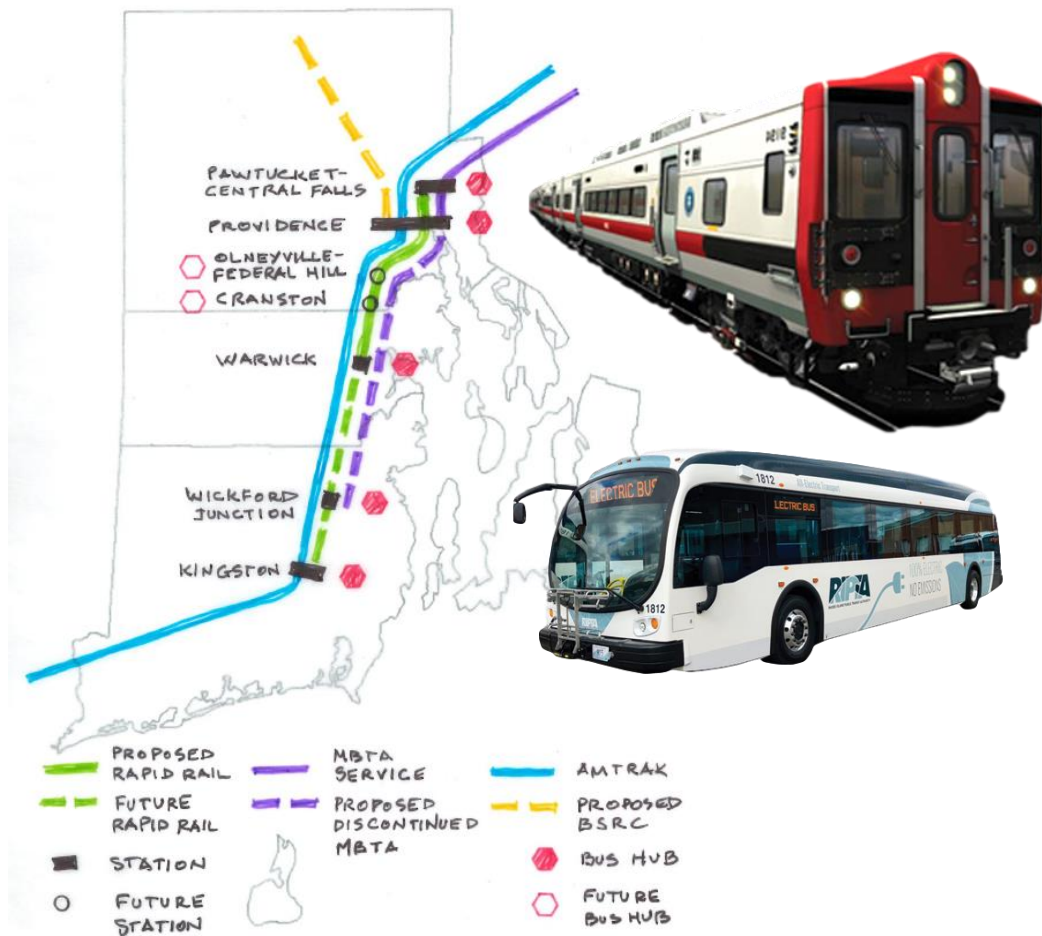
As part of the TMP, Grow Smart RI proposes that planners examine the feasibility of high-speed, high-frequency Rapid Rail transit service from Pawtucket to Warwick, and extending this service to Wickford Junction and Kingston when supported by demonstrated demand. Rhode Island Rapid Rail could become the backbone of a fully integrated rail and bus transit network that also connects with MBTA service to Boston, Amtrak service to Connecticut and New York, and that replaces the expensive, little-used and low-frequency MBTA service south of Providence.

Using high-performance, self-propelled electric multiple unit (EMU) trains along the Northeast Corridor (NEC) Main Line as well as an electrified freight track and rail sidings, the trip time by Rapid Rail from Pawtucket to Providence would be about four minutes, and from Providence to T.F. Green would be about 11 minutes. Ultimately, riders could travel by Rapid Rail from Pawtucket to Kingston in a little over half an hour.

The concept also calls for reorganizing RIPTA’s bus network away from its current radial system in which nearly all bus routes converge at Kennedy Plaza, in favor of a network design organized around regional bus hubs at Rapid Rail stations that leverages the speed of a dedicated right-of-way along the Northeast Corridor.

³ The complete details of the requests are outlined in the *Transportation Advisory Committee’s Transit Subcommittee Status and Funding Report* dated August 23, 2017.

Rhode Island Rapid Rail



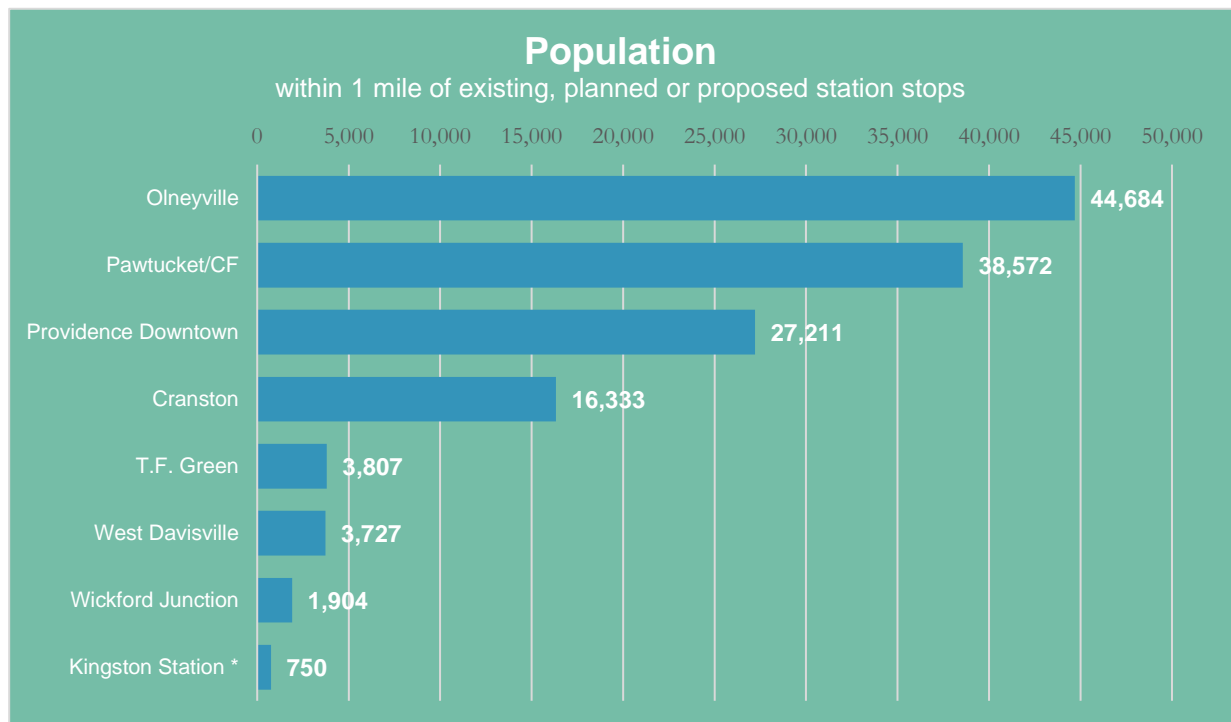
Proposed Rapid Rail Travel Times (in minutes)							
	Pawtucket	Providence	Olneyville	Cranston	T.F. Green Warwick	Wickford Junction	Kingston
Pawtucket	-	4.0	7.0	10.0	15.0	21.0	33.0
Providence	4.0	-	3.0	6.0	11.0	17.0	29.0
Olneyville	7.0	3.0	-	3.0	8.0	14.0	26.0
Cranston	10.0	6.0	3.0	-	5.0	12.0	22.0
Warwick	15.0	11.0	8.0	5.0	-	7.0	19.0
Wickford Junction	21.0	17.0	14.0	12.0	7.0	-	12.0
Kingston	33.0	29.0	26.0	22.0	19.0	12.0	-

Better Connecting People with Jobs

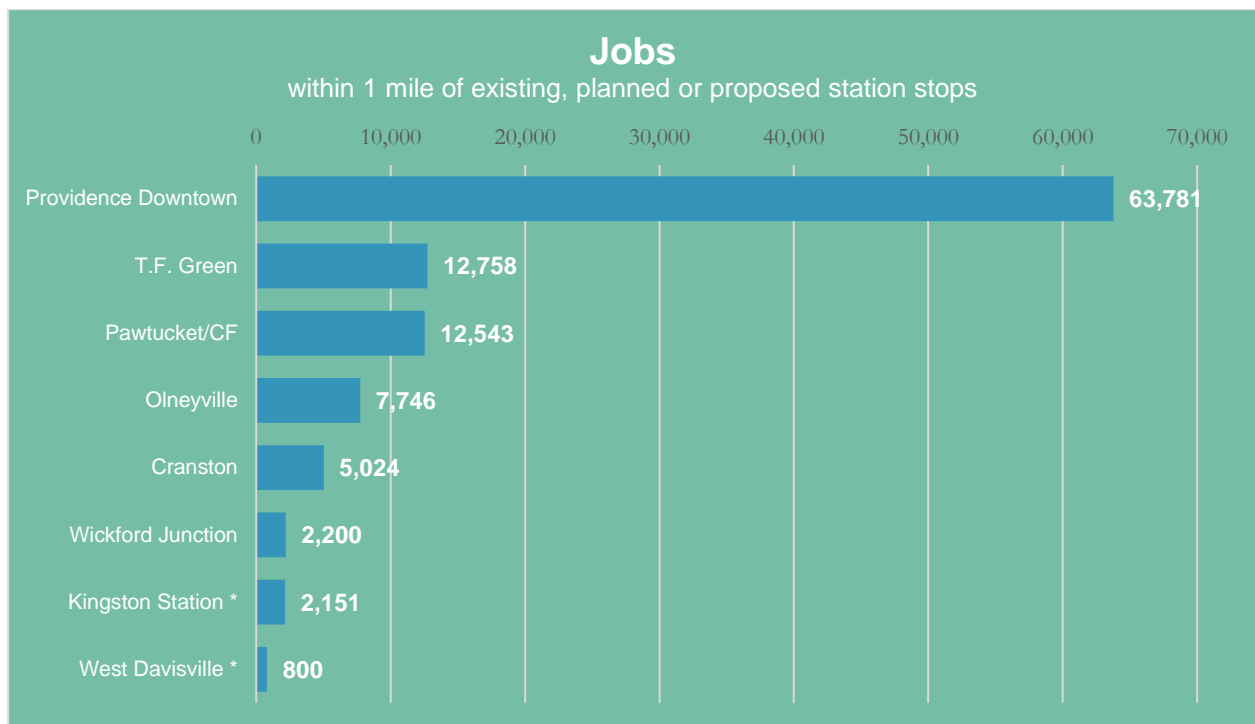
The economic competitiveness of a region is driven by the size of its labor force – the larger the labor force, the more attractive Rhode Island becomes for new and expanding businesses. But the size of a labor market is defined not by population or density but by the number of workers who can travel to a given location within a reasonable commute – on average, about 30 minutes.

In regions with relatively low population growth, like Rhode Island, the best way to grow the labor force is by improving worker mobility. By minimizing commuting times, more people can gain access to a wider range of jobs, and businesses become more productive when they can draw from a larger pool of workers.

Improved worker mobility can be achieved either by investing in expanded road capacity or in better transit. But roads are expensive to build and maintain, consume valuable developable land, encourage greater dependence on the automobile, and with induced demand become more congested and less efficient. By utilizing the NEC and existing roadways, transit leverages past and ongoing infrastructure investments, reduces highway congestion and greenhouse gas emissions. With increased use, transit becomes more efficient.



* Does not reflect 7,000+ students who reside at URI - GIS Analysis, RI Statewide Planning, January, 2019.



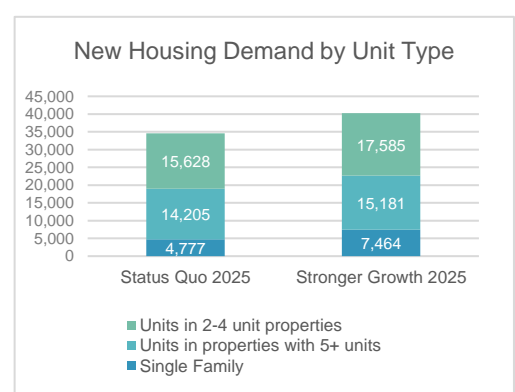
* Does not reflect 11,000+ jobs at QDC and 3,000+ jobs at URI – GIS Analysis, RI Statewide Planning, January, 2019

A significant percentage of Rhode Island’s work force could be served by Rapid Rail. Half of all the State’s jobs are within eight municipalities along the NEC⁴, and 43% of these jobs are within one mile of a potential Rapid Rail stop. In Providence, the State’s largest job market, two-thirds of the jobs are within a mile of proposed Rapid Rail stops, and in Pawtucket-Central Falls, 44% of the jobs are within a mile of its new transit center.⁵ Warwick has also identified the area around a potential Rapid Rail stop as having the greatest potential for economic development.

Housing and Land Use

Rhode Island is facing a growing housing crisis. In 2016, HousingWorksRI, a housing policy and research organization at Roger Williams University, published a report commissioned by Rhode Island Housing that projected the need for up to 40,000 new housing units in Rhode Island by 2025, 80% of which should be multi-family to meet the demands of moderate-income families, Millennials and Baby Boomers looking to downsize.⁶

The demand for multifamily housing can only be met if permitted by land use regulations that allow for greater density, and supported by improved accessibility. As the saying goes, the three most important things in real estate “location, location and location,” which includes vibrant, walkable, amenity-rich neighborhoods and convenient access to jobs.



Projecting Future Housing Needs Report, 2016

are

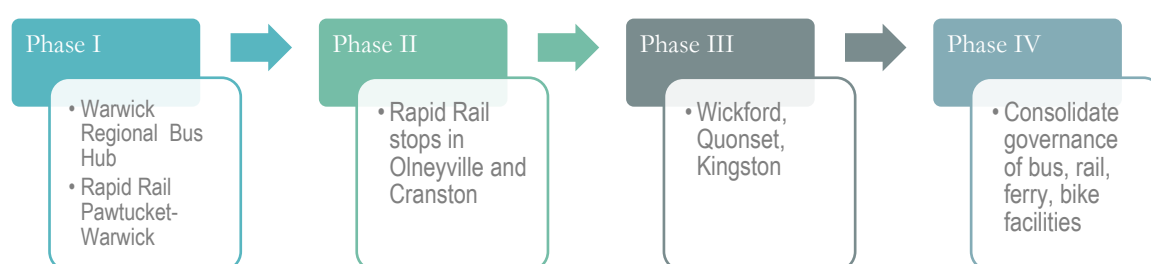
⁴ RI Dept of Labor and Training, Rhode Island Commuting Patterns Based on 2009-2013 ACS data.

⁵ RI Statewide Planning GIS Analysis, January 2019 using 2013 Census and 2013 RI DLT data.

⁶ *Projecting Future Housing Needs*, April 2016, HousingWorks RI.

One of the few places in Rhode Island that fits this description today is the Capital Center District in Providence, although the Conant Thread District in Pawtucket-Central Falls and City Centre Warwick are emerging centers of significant planned mixed-use development. Grow Smart RI, in partnership with HousingWorksRI and Roger Williams University, recently completed a major analysis of transit-oriented development opportunities at five additional locations in Rhode Island that have a capacity for up to 73,000 new housing units and 25,000 new jobs⁷ with the enactment of certain zoning reforms. But the development potential of all these sites is highly dependent upon improvements to transit.

Our Rapid Rail Recommendation



Grow Smart RI recommends a phased approach to the development of a fully-integrated, state-wide bus-rail network, starting in the most densely developed area of the State.

First, we recommend that the TMP Working Group research the potential for a new regional transit hub at the InterLink in City Centre Warwick. About 150,000 people live within a three-mile radius (a 15-minute bus ride) of the InterLink, and a new bus hub there could improve local mobility and reduce the number of bus routes terminating at the planned transit center at Providence station. Concurrently, the TMP should research and evaluate the feasibility and cost/benefit of high-frequency Rapid Rail service to connect the proposed transit centers in Pawtucket, Providence, and Warwick.

Second, explore the feasibility of adding additional Rapid Rail stops in Olneyville-Federal Hill, near the 6-10 interchange, and at Park Avenue adjacent to the Cranston-Providence city line. Both these sites have the potential for multimodal transit connections that would serve dense, walkable neighborhoods.

⁷ *Evaluating the Potential for Transit-Oriented Development in RI*, February 2019

Third, examine the cost-benefit of extending Rapid Rail service to Wickford Junction to replace all MBTA service south of Providence, and ultimately to a new regional transit center in Kingston that would serve all of the South County, including the University of Rhode Island. The Working Group should also consider the potential for providing “rush hour” rail service to the Quonset Business Park through West Davisville, where more than 12,000 people commute to work. Service to these locations would likely follow the successful operation of Rapid Rail from Pawtucket to Warwick.



Fourth, consider combining all responsibilities for the operation, maintenance and planning of bus, rail, ferry and transit-connected bike facilities within a single, “mobility manager” entity, comparable to RIDOT. Such a structure would streamline operations, allow for the seamless integration of fares and schedules, and provide a single point of contact for local planners seeking to encourage transit-oriented development. It would also enable RIDOT to focus exclusively on road and bridge construction, maintenance and repair, which is one of the State’s highest priorities.



We envision a network of well-connected multi-modal transit centers along the NEC that would replace the current MBTA commuter rail service between Providence Station and Wickford Junction. Utilizing one- or two-car EMUs, Rapid Rail would be capable of speeds comparable to Amtrak trains traveling on the same right of way, resulting in an end-to-end travel time from Pawtucket to Kingston of just over half an hour. Train lengths or capacity could be increased incrementally over time in response to passenger demand.

“Rapid Rail would be capable of speeds comparable to Amtrak trains traveling on the same right of way, resulting in an end-to-end travel time from Pawtucket to Kingston of just over half an hour”.

The new distributed network of transit hubs would reduce bus congestion in Downtown Providence and shorten several bus routes, allowing for more frequent service to regional hubs with no increase in operating cost. Hubs with fewer bus routes, many traveling shorter distances, would make “pulse” scheduling possible to reduce transfer times and dramatically improve local mobility throughout the State.

Transit Centers

Pawtucket-Central Falls – Simply relocating the RIPTA bus hub to the new commuter rail station that is currently under construction and adding downtown “super stops” will improve access to MBTA trains, but it will do little to improve trip times to other Rhode Island cities. Rapid Rail from the new intermodal transit center would provide a four-minute connection to Providence station and a 15-minute connection to T.F. Green Airport.



Providence – Plans were announced several years ago to move the Kennedy Plaza bus hub to a new Providence Intermodal Transit Center (PITC) adjacent to the Providence Amtrak Station. The redistribution of a substantial number of bus lines to other transit centers served by Rapid Rail would reduce bus congestion in the Capital Center District and allow a reduction in the size of the PITC footprint. Rapid Rail would provide an eleven-minute connection to T.F. Green Airport, and make it far easier for passengers from Pawtucket, Warwick and South County to reach Downtown Providence. However, Rapid Rail would sharply increase rail passenger volume through the train station, which would have to be factored into the design of the new PITC. Nevertheless, access by Amtrak, MBTA commuter rail, Rapid Rail, RIPTA bus lines and the Downtown Transit Connector (DTC) would make nearby development sites far more attractive for transit-oriented development (TOD). Indoor or covered bike parking facilities, and bike-share and e-scooter programs would expand access to the PITC.



Warwick/TF Green Airport – The City of Warwick has worked aggressively to shape the conditions for attracting private mixed-use development consistent with its City Centre Warwick Master Plan. It has prepared sites for redevelopment, modified its zoning to allow mixed-use development by right, made infrastructure investments and is in the process of making the area more pedestrian-friendly. However, the existing level of transit service remains insufficient to optimize its TOD potential, as well as its effectiveness as an airport rail shuttle. Approximately 150,000 people could be served by a regional transit hub at the InterLink, and a Rapid Rail connection would provide eleven- to 15-minute connections to Providence and Pawtucket, and potentially, enhanced rail service from South County. RIDOT is already working to fund construction of a fourth track or northbound rail siding at the InterLink for a new Amtrak stop there. The new rail improvements could also facilitate Rapid Rail access to the station.



Other Infill Stations – Rapid Rail offers the opportunity for additional rail stops with TOD potential in Olneyville (Providence’s “other downtown”), and Cranston’s Elmwood Enterprise Zone District. Both sites either currently have or have the potential for dense, walkable neighborhoods, and fall within the most densely populated area of the State where improved transit would be most impactful.

Wickford Junction – RIDOT invested over \$50 million in track improvements and station and parking construction at Wickford Junction in 2012,⁸ but current MBTA ridership and service has been far below projections. While the Town of North Kingstown has identified this area as a growth center in its comprehensive community plan and has zoned the immediate area for TOD, the area surrounding the train station lacks sewers, an impediment to higher density development.

Rapid Rail to Wickford Junction could replace current express bus service to Kennedy Plaza, and provide seven- to 17-minute travel to T.F. Green Airport and Providence Station, and a little over an hour⁹ to Boston's South Station. The station could also become an area hub for additional local bus routes, including 20-minute express bus service to Newport.

Improved transit (the area already has excellent access by car along with existing indoor parking) would make Wickford Junction a particularly attractive site for commercial development. The abandoned railroad right of way that extends from the station to Wickford village could be repurposed as a bike path to connect with nearby residential neighborhoods. If the marginal cost of extending Rapid Rail to Wickford Junction is competitive with the current cost of MBTA service, and if North Kingstown continues its commitment to supporting TOD with additional investments and partnership regarding sewers and infrastructure, the TMP Working Group should give Rapid Rail service to Wickford Junction serious consideration.

Kingston – The University of Rhode Island (URI) is facing a transportation crisis. Over 11,000 of URI's 18,000 students, plus 3,000 faculty and staff, commute by car daily,¹⁰ requiring extensive amounts of high-value land to be set aside for parking lots. URI recently completed a Transportation and Parking Master Plan to support continued growth while enhancing mobility, campus character, and aesthetics through environmentally sustainable and low impact smart growth strategies¹¹. Rapid Rail would provide an efficient link between the Kingston campus and its Downtown Providence Feinstein campus, new URI/RIC Nursing Education Center in the Jewelry District, and recently-announced Innovation Campus Projects, three of which have a Providence component. A 30-minute connection between Kingston and Providence would be transformative. Connecting these activity centers would also align with the university's increased commitment to utilizing RIPTA's UPass program and its pending ban on freshman keeping vehicles at the Kingston campus.

A multi-modal transit center at URI could provide frequent shuttle connections to Peace Dale/Wakefield, and Bonnet Shores for URI students, and bike paths and a circulator bus route could connect the new transit center to all parts of the URI campus. The transit center could also be the hub for all of South County, from Westerly to Narragansett. Rapid Rail could replace long distance express bus routes from South County to Providence, which have the highest per-passenger operating costs in the RIPTA network. South Kingstown's rapidly growing population makes the area attractive for mixed use development, including privately-developed off-campus housing, and incubators partnering with URI. The short commute to commercial centers near the Warwick and Wickford Junction stations would encourage compact residential development at Kingston as well.

⁸ Parking and station improvements totaled \$44.7 million, and rail improvements for both Warwick and Wickford Junction totaled \$96.3 million.

⁹ *Regional Rail for Metropolitan Boston*, a 2018 study by TransitMatters, advocates for more frequent rail service, new electric trains, and raised platforms on the MBTA Providence line. Transit Matters estimates that travel times from Providence to Boston's South Station would be shortened to 46 minutes, and from the new Pawtucket-Central Falls station would take 43 minutes. The TMP should wholeheartedly support this initiative.

¹⁰ <https://www.uri.edu/about/facts/>

¹¹ Transportation and Parking Master Plan, University of Rhode Island, March 2018

Benefits

Improved Mobility – It is often difficult to get around Rhode Island by public transit unless you are traveling to Kennedy Plaza. For example, a bus trip from one location in Cranston or Warwick (the second and third largest cities in the State) to another often involves traveling to Kennedy Plaza. Even traveling from Westerly to Narragansett by bus currently requires a trip to Kennedy Plaza. Regional transit centers would shorten the total distance traveled; fewer bus routes to each transit center would make “pulse” scheduling possible; and shorter bus routes would make it possible for buses to run more frequently.



Leverage Infrastructure Investments – The proposed concept integrates well with development plans that are currently under way, including the rail station and transit center in Pawtucket, the new PITC and Downtown Transit Connector in Providence, and proposed track improvements in Warwick. It is also able to leverage RIDOT’s past investments in Warwick and Wickford Junction, and Amtrak’s recent station improvements in Kingston. EMU’s running on the NEC mainline, in addition to an electrified freight track and rail sidings, would utilize Amtrak’s overhead catenary power system.

Cost Savings – The current MBTA service south of Providence is extremely expensive. RIDOT is responsible for all MBTA operating expenses for service south of Providence, including track and station construction and maintenance, purchase of rail cars, equipment maintenance, access to the NEC (owned by Amtrak in Rhode Island), and insurance.¹² MBTA typically utilizes a large, expensive mix of bi-level and single-level passenger coaches pulled by diesel locomotives for this service, which are sized and staffed for commuter ridership on the Providence line to support all stations from Rhode Island to Boston.

The MBTA requires on-board conductors for fare collection because the Providence line has a ten-zone fare system with single-fare, multi-fare and monthly commutation tickets. A single fare for all rides between Kingston and Pawtucket, regardless of the distance traveled would make pre-board fare collection, like on a subway line, possible, which would allow each train to run with a single operator, even at rush hour, significantly reducing labor costs.

Initially, Rapid Rail service could be provided by a single-car EMU that would not require diesel or electric locomotives, and expand to two-car units as warranted. A single EMU car would be less than 40% of the cost of an electric or diesel locomotive and a single passenger coach. Two EMUs would be roughly 60% of the cost of a locomotive with two conventional passenger coaches.

Depending on the seating arrangement and number of standees, a single EMU car can accommodate between 110 and 160 passengers, while a standard 40-foot bus has a capacity of 40-60 passengers. An EMU car can carry nearly three times as many passengers as a bus for the same operator salary costs.

Comparing purchase costs, vehicle life, and passenger capacity, an EMU costs about the same as a bus because its useful life is three times longer and its passenger capacity is roughly three times

¹² The South County Operating Agreement dated September 30, 2010 states that RI is responsible for all of MBTA’s operating costs past Providence station, net of fares collected for passenger travel from Warwick and Wickford Junction to Providence (\$3.25 to \$3.50) and the incremental charge for travel from those stops to Boston (\$.50 to \$1.00).

greater. It would take nine buses to match the passenger capacity and vehicle life of a single EMU over a 45-year period.

Funding – There are several sources of funding for capital and operations that we believe could be pursued for realizing a long-term investment in Rapid Rail for Rhode Island, including the following:

- Transportation and Climate Initiative (CTI) of the Northeast and Mid-Atlantic States
- Federal Railroad Administration (FRA) Consolidated Rail Infrastructure and Safety Improvement (CRISI) grants
- FTA Capital Investment Grants Program
- FTA Pilot Program for TOD Planning
- Railroad Rehabilitation & Improvement Financing (RRIF)
- DOT BUILD (Better Utilizing Investments to Leverage Development) grants
- State/Local Value Capture

Regional Competitiveness – To attract young, college-educated millennials, Rhode Island needs to develop more options for dense, diverse, walkable neighborhoods with good transit connections to many job opportunities. Historically, Rhode Island’s cities have competed with one another for jobs and knowledge workers, viewing growth in the State as a zero-sum game. But to be successful they need to “cooperate in order to compete”, which can only be done if they are more connected. If Pawtucket is a four-minute train ride from downtown Providence, and 15 minutes from Warwick/T.F. Green Airport, these cities can function as a single integrated urban area, enabling them to compete and integrate more successfully with today’s “superstar” cities, such as New York and Boston.

Reduced Highway Congestion – Enhanced rail service would help relieve rush-hour congestion on I-95, Route 4 and US 1 where they run parallel to the NEC. Less congested highways would lead to cost-savings through lower maintenance costs, and less pressure to add capacity to meet growing demand.

Improved Air Quality and reduced climate change emissions – The transportation sector in the Northeast is the region’s single-largest and fastest-growing contributor to greenhouse gas emissions (GHG), producing nearly 40% of GHG in Rhode Island. Fewer cars on the road would reduce carbon emissions, making a significant contribution to meeting the State’s aggressive greenhouse gas reduction targets as outlined in the Resilient Rhode Island Act.

Potential Concerns

Wouldn’t Rapid Rail be expensive? Although building rail-based transit infrastructure is costly, much of the rail infrastructure already exists, is well maintained and in an excellent state of repair. Overhead catenary lines would have to be added to the non-electrified segments of the NEC, new EMU cars and a new maintenance facility would be needed, enhancements to transit centers would be necessary and some new track might be needed to extend service to Kingston. But there are numerous federal programs for capital projects of this sort (see Funding, above), especially along the NEC. The real issue is what the cost would be to Rhode Islanders. There are additional

operating costs to be considered, but there are also potential cost-savings from redesigning the current bus network, and replacing MBTA commuter rail service south of Providence (see Cost Savings, above).

Wouldn't RIPTA bus riders have to transfer more often? Some RIPTA riders would have to transfer more often. For example, a rider traveling by bus to one transit center to catch a bus at another transit center would have to transfer twice. (This is already the case for riders taking a bus to the Pawtucket bus hub, and then connecting with another bus leaving from Kennedy Plaza.) However, Rapid Rail would be much faster than a local bus, and many bus routes would be much shorter and run more frequently. Overall travel time would almost certainly be less than traveling by local bus all the way to Kennedy Plaza to transfer. Additionally, the new transit centers would be more compact, and could be designed to be safer with more comfortable waiting areas than the current transfer condition at Kennedy Plaza.

What about riders from Warwick and Wickford Junction traveling to Boston? Today, there are just ten trains from Wickford Junction and Warwick to Boston on weekdays with service gaps in the middle of the day, and no service on weekends and holidays. While Rapid Rail riders would have to transfer onto MBTA commuter trains to Boston at Providence or Pawtucket, they would have double the number of trains to choose from, and ample weekend service where there is none today. Rapid Rail would also shorten today's MBTA travel times from Warwick and Wickford Junction to Providence by eight to eighteen minutes.

What about Westerly? – About 79% of Westerly residents work in Westerly and eastern Connecticut. (Only 400 workers, or 4% of Westerly's workforce, commute to the five largest cities in the Providence metro area.¹³) Efforts to enhance transit in the southwest corner of the State should therefore focus on improved mobility to cities such as Stonington, Groton, and New London, and work with Amtrak to cross-honor RIPTA fares on Amtrak trains from Westerly to Kingston and Providence.

What about Woonsocket? The Boston Surface Railroad Company (BSRC) has announced that it will launch commuter rail service in 2020 between Woonsocket and Providence, where the BSRC would connect with Amtrak, MBTA, RIPTA and the DTC, and eventually provide commuter rail service from Providence and Woonsocket to Worcester as well. The TMP Working Group would need to analyze the capacity impact of BSRC service on Providence and Pawtucket-Central Falls stations and how Rapid Rail, MBTA and BSRC trains would be turned at the north and south after each run.

What about Newport? – About 78% of Newport residents work in either Newport, Middletown or Portsmouth (as in Westerly, the focus of the Newport bus hub should be on transit within this localized area), but over 500 local workers also commute to Providence.¹⁴ An express bus from Newport Gateway Transit Center to Wickford Junction, a distance of 15 miles, would take 20 minutes, and a Rapid Rail connection to Warwick and Providence would make it possible to travel from Newport to the airport in about 30 minutes, and to Providence in about 40 minutes – 28 minutes less than the current 60 Newport-Providence bus.

¹³ RI Department of Labor and Training, Rhode Island Commuting Patterns. Compiled from US Census Bureau, 2009-2013 ACS survey estimates.

¹⁴ Ibid.

What about the Impact of an MBTA Regional Rail system? – A movement to transform the Massachusetts commuter rail network into a Regional Rail system based on the TransitMatters white paper, *Regional Rail for Metropolitan Boston* published Winter 2018, is gaining momentum. Regional Rail would utilize high-speed EMU trains and high-level platforms for level boarding at all stations. The concept has been rapidly gaining support within the Commonwealth, and service could in theory be extended past Providence in Rhode Island. Trains are proposed to run every half hour throughout the day, and every 15 minutes during peak travel times. But Massachusetts Regional Rail may be an expensive solution for Rhode Island because it would utilize large eight-car train sets requiring multiple conductors staffing trains to collect fares. It would also make it complicated to develop a seamless fare system for travel by bus and rail in the State. The TMP Working Group should compare the costs and benefits of each option.

Conclusion

The Transit Master Plan, *TransitForward RI 2040*, offers a once in a generation opportunity to envision a transit system that seamlessly integrates rail and bus service into a single network, providing high-speed connections through the State's dense urban core, improving connectivity to Amtrak and MBTA, and expanding access to T.F. Green Airport.

Rhode Island has an opportunity to build on earlier initiatives, such as the Mass Transit Infrastructure Bond initiative, the Pawtucket-Central Falls Transit Hub (now under construction), improvements at Warwick, Wickford Junction and Kingston train stations, as well as the proposed Intermodal Transit Center and the Downtown Transit Connector in Providence. Our state's metro region has densities that are comparable to our much larger regional neighbors. High-frequency Rapid Rail along the NEC, connecting with bus networks to nearby neighborhoods, offers the potential to accelerate Rhode Island's economic growth, revitalize its cities and towns, measurably decrease carbon emissions, boost housing production, better connect workers with jobs, and save residents thousands of dollars in annual transportation costs.

Appendix

Results of 2014 Bond Referendum in which state voters, by a margin of 20 points, approved a \$35 million Mass Transit Infrastructure Bond issue to help modernize statewide transit.

6. Mass transit hub infrastructure bonds: Approved

With 416 of 419 (99.3%) precincts reporting statewide

	YES		NO	
Barrington	4,230	67.4%	2,047	32.6%
Bristol	3,866	62.3%	2,340	37.7%
Burrillville	2,023	49.4%	2,069	50.6%
Central Falls	1,216	76.3%	377	23.7%
Charlestown	1,599	58.3%	1,142	41.7%
Coventry	5,216	46.7%	5,949	53.3%
Cranston	13,326	57.9%	9,690	42.1%
Cumberland	5,686	56.5%	4,371	43.5%
East Greenwich	2,796	59.4%	1,908	40.6%
East Providence	7,241	62.3%	4,383	37.7%
Exeter	1,197	49.9%	1,202	50.1%
Foster	829	48.1%	895	51.9%
Glocester	1,557	49.5%	1,586	50.5%
Hopkinton	1,207	51.1%	1,156	48.9%
Jamestown	1,598	64.7%	871	35.3%
Johnston	4,529	54.5%	3,784	45.5%
Lincoln	4,051	55.5%	3,245	44.5%
Little Compton	742	53.5%	645	46.5%
Middletown	2,704	59.1%	1,870	40.9%
Narragansett	2,968	57.5%	2,198	42.5%
New Shoreham	410	73.0%	152	27.0%
Newport	4,352	68.6%	1,991	31.4%
North Kingstown	5,667	59.2%	3,913	40.8%
North Providence	5,479	58.6%	3,873	41.4%
North Smithfield	1,904	49.8%	1,921	50.2%
Pawtucket	7,660	66.5%	3,863	33.5%
Portsmouth	3,707	61.3%	2,339	38.7%
Providence	23,814	77.0%	7,104	23.0%
Richmond	1,271	49.8%	1,280	50.2%
Scituate	2,056	50.9%	1,982	49.1%
Smithfield	3,574	54.0%	3,045	46.0%
South Kingstown	5,726	63.0%	3,369	37.0%
Tiverton	2,495	55.2%	2,024	44.8%
Warren	1,960	61.0%	1,254	39.0%
Warwick	15,584	58.6%	11,001	41.4%
West Greenwich	1,009	46.6%	1,158	53.4%
West Warwick	3,799	53.9%	3,254	46.1%
Westerly	3,608	58.7%	2,539	41.3%
Woonsocket	3,331	52.8%	2,981	47.2%
Total	165,987	60.0%	110,771	40.0%

